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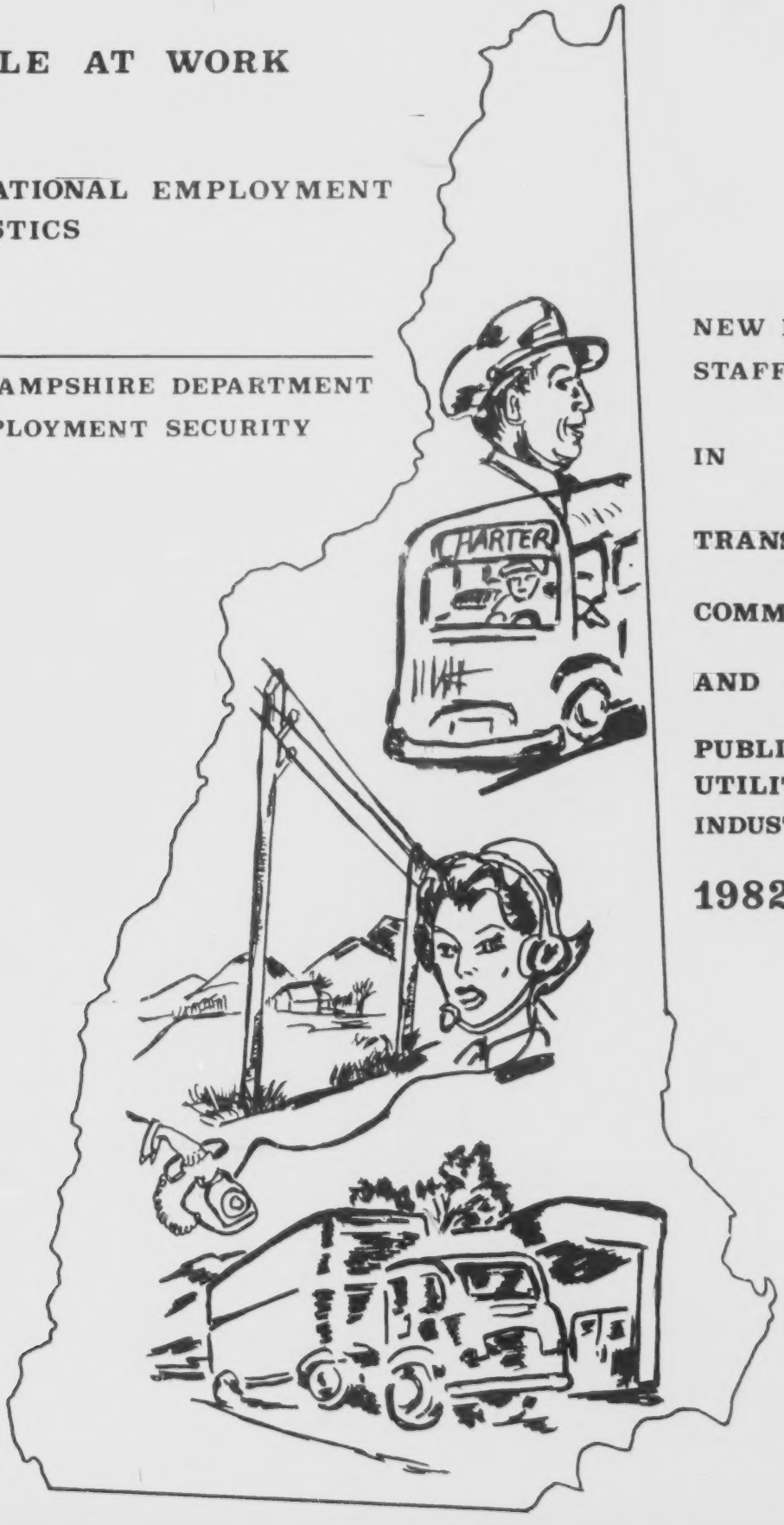
PEOPLE AT WORK

OCCUPATIONAL EMPLOYMENT STATISTICS

NEW HAMPSHIRE DEPARTMENT
OF EMPLOYMENT SECURITY



NEW HAMPSHIRE STAFFING PATTERNS IN TRANSPORTATION COMMUNICATIONS AND PUBLIC UTILITIES INDUSTRIES

1982

NEW HAMPSHIRE STAFFING PATTERNS IN TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES INDUSTRIES

1982

An Occupational Employment Statistics Survey

Conducted by The

Economic Analysis and Reports Section

NEW HAMPSHIRE DEPARTMENT OF EMPLOYMENT SECURITY

In Cooperation With The

U.S. BUREAU OF LABOR STATISTICS

AND THE

EMPLOYMENT AND TRAINING ADMINISTRATION

Using A Grant From The

NEW HAMPSHIRE STATE OCCUPATIONAL INFORMATION COORDINATING COMMITTEE

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PREFACE

Our sincere appreciation is extended to those employers who participated in this survey. Without their support, this publication would not have been possible. In particular,we wish to thank Donald W. Roberge, Executive Director of the New Hampshire SOICC for his support and cooperation.

We would also like to express our thanks to the United States Department of Labor, both at the regional level in Boston, Mass. and the national level in Washington,D.C. for their technical assistance in the Federal-State Cooperative effort.

This report was prepared by the New Hampshire Occupational Employment Statistics (OES) Program staff: William Halm, with programming and data processing support provided by April Limber.

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INTRODUCTION

The United States Department of Labor initiated the OES program in mid-1971 to meet the increasing demand for current occupational data. The program is based upon the collection of employment data by mail sampling selected sectors of the economy on a recurring three year cycle.

Publications of the first and second cycles include: Government (1974, 1977 and 1979); Trade (1976 and 1979); Manufacturing (1977 and 1980), Construction, Insurance, Finance, Real Estate and Services (1978); Educational Services (1978), Regulated Industries (1976 and 1979) and Hospitals (1980).

Between June and December 1982, the New Hampshire Department of Employment Security conducted an occupational employment survey of regulated industries by means of a questionnaire. This report is the first in the third survey cycle and was compiled from usable returns from the original mailing plus one follow up.

As used in this report, Standard Industrial Classification (SIC) defines industries according to composition and structure and spans the entire field of economic activities. Industrially classified statistics are used not only to show how industries have performed over past years but to indicate emerging and rapidly growing industries. The data obtained from these surveys is being used as input to update the OES Industry/Occupation Matrix. It, in turn, provides the base for projecting the non-farm sector or any industry subdivision thereof.

The goal of the OES Program is to direct training programs to meet both current and long-range personnel needs. To that end, it is an invaluable tool enabling employers, educational planners, manpower analysts, economists and other users to intelligently deal with inequities in the supply and demand of workers in specific occupations on the local, state or national level. Some industries could not be published since there were insufficient usable returns and the information could be misleading or publication would jeopardize the confidentiality of data provided by some of the firms reporting.

SUMMARY

OCCUPATIONAL EMPLOYMENT IN TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITIES INDUSTRIES (Except Railroad Transportation and U.S. Postal Services) SIC 40-49 (Except 40,43)

There were an estimated 14,120 wage and salary workers in the Transportation, Communication, and Public Utilities industries covered by the New Hampshire Unemployment Compensation Law during the survey period of the second quarter of 1982. Compared to a similar survey in 1979, employment in these industries grew by 913 workers or six percent.

The four major industrial groups presented in this occupational report by two-digit SIC (Standard Industrial Classification) were Passenger Transportation (SIC 41); Motor Freight Transportation and Warehousing (SIC 42); Communication (SIC 48); and Electric, Gas, and Sanitary Services (SIC 49). The communication industry employed the largest number of workers with 4,983 (24.5 percent) followed by Motor Freight Transportation and Warehousing with 3,469 workers (17.1 percent); Electric, Gas, and Sanitary Services with 3,336 workers or (7.4 percent); Passenger Transportation with 1,497 workers (10.6 percent). The remaining three industries in this segment of the economy, namely SIC 44, 45, and 47 combined to make up less than six percent of the total employment and each industry was too small to meet publication criteria in the OES (Occupational Employment Statistics) program.

Since the 1979 survey, the Communication industry grew by 587 workers (13 percent) while Electric, Gas, and Sanitary Services added 551 workers (20 percent). The Passenger Transportation industry only grew by 223 workers (7.4 percent) while Motor Freight Transportation and Warehousing lost 54 workers (2 percent).

Our sample consisted of 288 units representing an employment of 12,474. Usable responses were received from 212 units or 74 percent of the units sampled. The reported employment was 10,405.

STAFFING PATTERNS

LOCAL AND SUBURBAN TRANSIT AND

INTERURBAN HIGHWAY PASSENGER TRANSPORTATION

(SIC 41)

OCCUPATIONAL TITLE	OES CODE	JUNE 1982 EST. EMPL.	PERCENT OF TOTAL	RELATIVE ERROR	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
		1/		2/			
TOTAL ALL OCCUPATIONS		1,497	100.0				
MANAGERS AND OFFICERS	10000	80	5.4	6	84	76	54.3
PROFESSIONAL OCCUPATIONS	20000	8	0.5	NA	-	-	NA
TECHNICAL OCCUPATIONS	30000	43	2.9				
Emergency Medical Technicians	35013	43	2.9	36	59	27	13.0
SERVICE OCCUPATIONS	40000	11	0.6	NA	-	-	NA
PRODUCTION OCCUPATIONS	50000	1,240	82.9				
Mechanics, Automotive	51008	58	3.9	8	63	53	41.3
All Other Mechanics and Repairers	51900	10	0.7	NA	-	-	NA
Bus Drivers	55A36	101	6.8	14	115	87	13.0
Cleaners, Vehicle	55A61	15	1.0	17	18	12	13.0
Taxi Drivers	55D09	205	13.7	4	212	198	23.9
Bus Drivers, School	55V05	786	52.5	2	800	772	50.0
All Other Skilled Craft and Kindred Workers	59001	8	0.5	NA	-	-	NA
All Other Operatives and Semiskilled Workers	59002	46	3.1	NA	-	-	NA
All Other Laborers and Unskilled Workers	59003	11	0.7	NA	-	-	NA
CLERICAL OCCUPATIONS	60000	114	7.6				
All Other Office Machine Operators	61199	1	0.1	NA	-	-	NA
Bookkeepers, Hand	61307	10	0.7	14	11	9	15.2
General Clerks, Office	61333	20	1.3	10	22	18	23.9
Payroll/Timekeeping Clerks	61351	12	0.8	18	14	10	13.0
Secretaries	61368	11	0.7	26	14	8	15.2
All Other Office Clerical Workers	61900	13	0.9	NA	-	-	NA
Dispatchers, Vehicle, Service	62018	41	2.7	8	44	38	28.3
All Other Plant Clerical Workers	62900	6	0.4	NA	-	-	NA
SALES OCCUPATIONS	70000	1	0.1	NA	-	-	NA

THE NINE OCCUPATIONS EMPLOYING THE

LARGEST NUMBER OF WORKERS

LISTED BY ORDER OF RANK

(SIC 41)

RANK	OES CODE	OCCUPATIONAL TITLE	JUNE 1982 ESTIMATED EMPLOYMENT
1	55V05	Bus Drivers, School	786
2	55D09	Taxi Drivers	205
3	55A36	Bus Drivers	101
4	51008	Mechanics, Automotive	58
5	35013	Emergency Medical Technicians	43
6	62018	Dispatchers, Vehicle, Service	41
7	61333	General Clerks, Office	20
8	55A61	Cleaners, Vehicle	15
9	61351	Payroll/Timekeeping Clerks	12

THE FIVE MOST FREQUENTLY REPORTED OCCUPATIONS

LISTED BY ORDER OF RANK

RANK	OES CODE	OCCUPATIONAL TITLE	PERCENT OF FIRMS REPORTING
1	55V05	Bus Drivers, School	50.0
2	51008	Mechanics, Automotive	41.3
3	62018	Dispatchers, Vehicle, Service	28.3
4	61333	General Clerks, Office	23.9
	55D09	Taxi Drivers	23.9

Estimates covering the following occupations were not shown separately because of fewer than ten (10) employees, or a relative error greater than 50 percent or disclosure of confidential employer information. They were however included in the appropriate "all" or "all other" category.

Accountants and Auditors
Accounting Clerks
Body Repairers, Automotive
Bookkeeping/Billing Machine Operators
Carpenters
Diesel Mechanics
Dispatchers, Police
Fuel Pump Attendants
Guards and Doorkeepers
Helpers, Trades
Janitors, Porters and Cleaners
Maintenance Repairers, General Utility
Meter Readers, Taxi
Oilers
Plumbers/Pipefitters
Supervisors, Nonworking
Switchboard Operators
Switchboard Operators/Receptionists
Ticket Agents
Tire Changers
Traffic Agents

STAFFING PATTERNS

MOTOR FREIGHT TRANSPORTATION

AND WAREHOUSING

(SIC 42)

OCCUPATIONAL TITLE	OES CODE	MAY 1982 EST. EMPL.	PERCENT OF TOTAL	RELATIVE ERROR	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
TOTAL ALL OCCUPATIONS		3,469 1/	100.0	2/			
MANAGERS AND OFFICERS	10000	354	10.3	12	395	313	92.9
PROFESSIONAL OCCUPATIONS	20000	28	0.8				
Accountants and Auditors	25401	16	0.5	34	21	11	12.5
All Other Professional Workers	29000	12	0.4	NA	-	-	NA
SERVICE OCCUPATIONS	40000	29	0.8	NA	-	-	NA
PRODUCTION OCCUPATIONS	50000	2,461	70.9				
All Other Mechanics and Repairers	51900	208	6.0	NA	-	-	NA
Truck Drivers, Heavy	54001	285	8.2	28	366	204	26.8
Tractor-Trailer Truck Drivers	54003	978	28.2	17	1,143	813	60.7
All Other Skilled Craft and Kindred Workers	59001	83	2.4	NA	-	-	NA
All Other Operatives and Semiskilled Workers	59002	435	12.5	NA	-	-	NA
All Other Laborers and Unskilled Workers	59003	472	13.6	NA	-	-	NA
CLERICAL OCCUPATIONS	60000	499	14.4				
Bookkeeping/Billing Machine Operators	61103	35	1.0	28	45	25	16.1
Bookkeepers, Hand	61307	42	1.2	28	54	30	19.6
General Clerks, Office	61333	114	3.3	22	139	89	41.1
Secretaries	61368	49	1.4	25	61	37	23.2
All Other Office Clerical Workers	61900	73	2.1	NA	-	-	NA
Dispatchers, Vehicle, Service	62018	82	2.4	14	93	71	41.1
Rate Clerks, Freight	62035	28	0.8	31	37	19	10.7
All Other Plant Clerical Workers	62900	76	2.2	NA	-	-	NA
SALES OCCUPATIONS	70000	98	2.8	NA	-	-	NA

THE NINE OCCUPATIONS EMPLOYING THE

LARGEST NUMBER OF WORKERS

LISTED BY ORDER OF RANK

(SIC 42)

RANK	OES CODE	OCCUPATIONAL TITLE	MAY 1982 ESTIMATED EMPLOYMENT
1	54003	Tractor-Trailer Truck Drivers	978
2	54001	Truck Drivers, Heavy	285
3	61333	General Clerks, Office	114
4	62018	Dispatchers, Vehicle, Service	82
5	61368	Secretaries	49
6	61307	Bookkeepers, Hand	42
7	61103	Bookkeeping /Billing Machine Operators	35
8	62035	Rate Clerks, Freight	28
9	25401	Accountants and Auditors	16

THE FIVE MOST FREQUENTLY REPORTED OCCUPATIONS

LISTED BY ORDER OF RANK

RANK	OES CODE	OCCUPATIONAL TITLE	PERCENT OF FIRMS REPORTING
1	54003	Tractor-Trailer Truck Drivers	60.7
2	61333	General Clerks, Office	41.1
	62018	Dispatchers, Vehicle, Service	41.1
3	54001	Truck Drivers, Heavy	26.8
4	61368	Secretaries	23.2

STAFFING PATTERNS

MOTOR FREIGHT TRANSPORTATION

AND WAREHOUSING

(SIC 42)

Estimates covering the following occupations were not shown separately because of fewer than ten (10) employees, a relative error greater than 35 percent or disclosure of confidential employer information. They were however included in the appropriate "all" or "all other" category.

Accounting Clerks
Adjustment Clerks
Carpenters
Cashiers
Claim Adjusters
Computer Operators
Crating and Moving Estimators
Craters
Crane, Derrick, & Hoist Operators
Delivery and Route Workers
Diesel Mechanics
File Clerks
Fuel Pump Attendants
Guards and Doorkeepers
Helpers, Trades
Industrial Truck Operators
Janitors, Porters & Cleaners
Keypunch Operators
Manifest Clerks
Maintenance Repairers, General Utility
Mechanics, Automotive
Payroll & Timekeeping Clerks
Purchasing Agents/Buyers
Refuse Collectors
Shipping Packers
Shipping/Receiving Clerks
Stock Clerk, Stockroom, Warehouse or Storage Yard
Supervisors, Nonworking
Systems Analyst, Electronic Data Processing
Switchboard Operators/Receptionists
Tire Changers
Traffic Agents
Truck Drivers, Light
Truck Driver Helpers
Typists
Welders and Flamecutters

STAFFING PATTERNS

COMMUNICATION

(SIC 48)

OCCUPATIONAL TITLE	OES CODE	MAY 1982 EST. EMPL.	PERCENT OF TOTAL	RELATIVE ERROR	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
		1/		2/			
TOTAL ALL OCCUPATIONS		4,983	100.0				
MANAGERS AND OFFICERS	10000	538	10.8	2	548	528	96.8
PROFESSIONAL OCCUPATIONS	20000	337	6.8				
Electrical and Electronic Engineers	21005	24	0.5	26	30	18	25.8
Announcers	25409	155	3.1	10	171	139	38.7
Broadcast New Analysts	25412	45	0.9	20	54	36	22.6
Writers/Editors	25436	33	0.7	27	42	24	29.0
All Other Professional Workers	29000	80	1.6	NA	-	-	NA
TECHNICAL OCCUPATIONS	30000	231	4.6				
Electrical and Electronic Technicians	32004	191	3.8	4	199	183	32.3
All Other Engineering Technicians	32900	40	0.8				
SERVICE OCCUPATIONS	40000	37	0.7				
Janitors, Porters & Cleaners	41000	30	0.6	9	33	27	25.8
All Other Service Workers	49000	7	0.1	NA	-	-	NA
PRODUCTION WORKERS	50000	1,738	34.9				
All Other Mechanics and Repairers	51900	34	0.7	NA	-	-	NA
Cable Splicers	55A43	210	4.2	1	212	208	16.1
Central Office Repairers	55A55	142	2.8	2	144	140	16.1
Supervisors, Nonworking	55B29	428	8.6	11	431	425	22.6
Installer Repairer/Section Maintainers	55B59	165	3.3	12	185	145	29.0
Line Installers-Repairers	55B73	155	3.1	3	159	151	25.8
All Other Skilled Craft and Kindred Workers	59001	562	11.3	NA	-	-	NA
All Other Operatives and Semiskilled Workers	59002	39	0.8	NA	-	-	NA
All Other Laborers and Unskilled Workers	59003	3	0.1	NA	-	-	NA

STAFFING PATTERNS

COMMUNICATION

(SIC 48)

OCCUPATIONAL TITLE	OES CODE	MAY 1982 EST. EMPL.	PERCENT OF TOTAL	RELATIVE ERROR	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
		1/		2/			
CLERICAL OCCUPATIONS	60000	1,940	39.0				
All Other Office Machine Operators	61109	13	0.3	NA	-	-	NA
Accounting Clerks	61301	193	3.9	2	196	190	25.8
Bookkeepers, Hand	61307	14	0.3	45	20	8	16.1
General Clerks, Office	61333	444	8.9	2	454	434	58.1
Secretaries	61368	28	0.6	21	34	22	41.9
Traffic Clerks	61386	21	0.4	25	26	16	22.6
Central Office Operators	61430	354	7.1	2	361	347	16.1
All Other Office Clerical Workers	61900	662	13.3	NA	-	-	NA
Stock Clerks, Stockroom, Warehouse, or Storage Yard	62008	39	0.8	2	40	38	9.7
All Other Plant Clerical Workers	62900	172	3.4	NA	-	-	NA
SALES OCCUPATIONS	70000	162	3.2				
Sales Representatives	71000	121	2.4	17	142	100	48.4
Sales Clerks	72002	41	0.8	17	48	34	9.7

THE TEN OCCUPATIONS EMPLOYING THE

LARGEST NUMBER OF WORKERS

LISTED BY ORDER OF RANK

(SIC 48)

RANK	OES CODE	OCCUPATIONAL TITLE	MAY 1982 ESTIMATED EMPLOYMENT
1	61333	General Clerks, Office	444
2	55B29	Supervisors, Nonworking	428
3	61430	Central Office Operators	354
4	55A43	Cable Splicers	210
5	61301	Accounting Clerks	193
6	32004	Electrical and Electronic Technicians	191
7	55B73	Line Installers-Repairers	155
	25409	Announcers	155
8	55A55	Central Office Repairers	142
9	71000	Sales Representatives	121

THE FIVE MOST FREQUENTLY REPORTED OCCUPATIONS

LISTED BY ORDER OF RANK

RANK	OES CODE	OCCUPATIONAL TITLE	PERCENT OF FIRMS REPORTING
1	61333	General Clerks, Office	58.1
2	71000	Sales Representatives	48.4
3	61368	Secretaries	41.9
4	25409	Announcers	38.7
5	32004	Electrical and Electronic Technicians	32.3

STAFFING PATTERNS

COMMUNICATION

(SIC 48)

Estimates covering the following occupations were not shown separately because of fewer than ten (10) employees, or a relative error greater than 50 percent or disclosure of confidential employer information. They were however included in the appropriate "all" or "all other" category.

Accountants and Auditors
Adjustment Clerks
Bookkeeping/Billing Machine Operators
Broadcast Technicians
Cashiers
Clerical Supervisors
Collectors
Commercial Artists
Computer Operators
Computer Programmers
Customer Service Representatives
Electronic Mechanics
Inspectors
Maintenance Repairers, General Utility
Mechanics, Automotive
Payroll/Timekeeping Clerks
Personnel Clerks
Personnel and Labor Relations Specialists
Photographers
Private Branch Service Advisors
Production Clerks/Coordinators
Public Relations Practitioners
Purchasing Agents/Buyers
Reporters and Correspondents
Sound Recording and Reproduction Technicians
Statistical Clerks
Stationary Engineers
Station Installers
Supervisors, Nonworking-Service Only
Systems Analyst, Electronic Data Processing
Switchboard Operators/Receptionists
Technical Directors
Trouble Locators
Typists

STAFFING PATTERNS

ELECTRIC, GAS, AND SANITARY SERVICES

(SIC 49)

OCCUPATIONAL TITLE	OES CODE	APRIL 1982 EST. EMPL. 1/	PERCENT OF TOTAL	RELATIVE ERROR 2/	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
TOTAL ALL OCCUPATIONS		3,336	100.0				
MANAGERS AND OFFICERS	10000	358	10.7				
PROFESSIONAL OCCUPATIONS	20000	404	11.3				
Civil Engineers	21004	20	0.6	19	24	16	10.7
Electrical and Electronic Engineers	21005	60	1.8	6	63	57	17.9
All Other Engineers	21900	38	1.1	NA	-	-	NA
Purchasing Agents/Buyers	25300	15	0.5	8	16	14	17.9
Accountants and Auditors	25401	54	1.6	8	58	50	39.3
Personnel and Labor Relations Specialists	25465	20	0.6	3	21	19	14.3
All Other Professional Workers	29000	197	5.1	NA	-	-	NA
TECHNICAL OCCUPATIONS	30000	165	5.0				
Estimators and Drafters, Utilities	32021	22	0.7	4	23	21	10.7
All Other Engineering Technicians	32900	74	2.2	NA	-	-	NA
All Other Technicians	39000	69	2.1	NA	-	-	NA
SERVICE OCCUPATIONS	40000	15	0.4	NA	-	-	NA
PRODUCTION OCCUPATIONS	50000	1,512	45.2				
Mechanics, Automotive	51008	34	1.0	7	36	32	25.0
Electric-Meter Installers, Cut-in, Cut-out, or Outside	51027	59	1.8	5	62	56	17.9
All Other Mechanics and Repairers	51900	192	5.7	NA	-	-	NA
Truck Drivers	54000	61	1.8	14	69	53	14.3
Electricians	55B12	94	2.8	0	94	94	7.1
Supervisors, Nonworking	55B29	203	6.1	2	207	199	64.3
Ground Workers, Utilities	55B49	13	0.4	21	16	10	14.3
Inspectors	55B58	10	0.3	24	12	8	17.9
Line-Installers Repairers	55B73	397	11.9	4	412	382	42.9
Maintenance Repairers, General Utilities	55B86	55	1.6	11	61	49	32.1

STAFFING PATTERNS

ELECTRIC, GAS, AND SANITARY SERVICES

(SIC 49)

OCCUPATIONAL TITLE	OES CODE	APRIL 1982 EST. EMPL. 1/	PERCENT OF TOTAL	RELATIVE ERROR 2/	RANGE HIGH	RANGE LOW	PERCENT OF FIRMS REPORTING
Refuse Collectors	55C51	16	0.5	29	21	11	10.7
Welders and Flamecutters	55D46	17	0.5	25	21	13	10.7
All Other Skilled Craft and Kindred Workers	59001	288	8.6	NA	-	-	NA
All Other Operatives and Semiskilled Workers	59002	23	0.7	NA	-	-	NA
All Other Laborers and Unskilled Workers	59003	50	1.5	NA	-	-	NA
CLERICAL OCCUPATIONS	60000	863	26.8				
Bookkeeping/Billing Machine Operators	61103	12	0.4	26	15	9	17.9
Computer Operators	61105	18	0.5	6	19	17	17.9
Keypunch Operators	61107	17	0.5	9	19	15	17.9
All Other Office Machine Operators	61199	8	0.2	NA	-	-	NA
Accounting Clerks	61301	19	0.6	19	23	15	28.6
Bookkeepers, Hand	61307	11	0.3	33	15	7	17.9
Cashiers	61314	23	0.7	17	27	19	35.7
Collectors	61319	22	0.7	4	23	21	28.6
General Clerks, Office	61333	190	5.7	3	196	184	42.9
Secretaries	61368	52	1.6	7	56	48	42.9
Clerical Supervisors	61396	19	0.6	12	21	17	14.3
Customer Service Representatives	61435	118	3.5	6	125	111	17.9
All Other Office Clerical Workers	61900	86	2.5	NA	-	-	NA
Meter Readers, Utilities	62002	162	4.8	4	169	155	64.3
Stock Clerks, Stockroom, Warehouse, or Storage Yard	62008	69	2.1	2	71	67	25.0
All Other Plant Clerical Workers	62900	37	1.1	NA	-	-	NA
SALES OCCUPATIONS	70000	19	0.6				
Sales Representatives	71000	19	0.6	9	21	17	25.0

THE TEN OCCUPATIONS EMPLOYING THE

LARGEST NUMBER OF WORKERS

LISTED BY ORDER OF RANK

RANK	OES CODE	OCCUPATIONAL TITLE	APRIL 1982 ESTIMATED EMPLOYMENT
1	55B73	Line Installers-Repairers	397
2	55B29	Supervisors, Nonworking	203
3	61333	General Clerks, Office	190
4	62002	Meter Readers, Utilities	162
5	61435	Customer Service-Representatives	118
6	55B12	Electricians	94
7	62008	Stock Clerks, Stockroom, Warehouse or Storage Yard	69
8	54000	Truck Drivers	61
9	21005	Electrical and Electronic Engineers	60
10	51027	Electric-Meter Installers, Cut-in, Cut-out or Outside	59

THE FIVE MOST FREQUENTLY REPORTED OCCUPATIONS

LISTED BY ORDER OF RANK

RANK	OES CODE	OCCUPATIONAL TITLE	PERCENT OF FIRMS REPORTING
1	55B29	Supervisors, Nonworking	64.3
	62002	Meter Readers, Utilities	64.3
2	55B73	Line Installers-Repairers	42.9
	61333	General Clerks, Office	42.9
	61368	Secretaries	42.9

STAFFING PATTERNS

ELECTRIC, GAS, AND SANITARY SERVICES

(SIC 49)

Estimates covering the following occupations were not shown separately because of fewer than ten (10) employees, or a relative error greater than 50 percent or disclosure of confidential employer information. They were however included in the appropriate "all" or "all other" category.

Adjustment Clerks
Auxiliary Equipment Operators
Cable Splicers
Chemical Engineers
Computer Programmers
Control Room Operators
Corrosion Control Fitters
Delivery and Route Workers
Diesel Mechanics
Dispatchers, Gas
Dispatchers, Load
Dispatchers, Vehicle Service
Drafters
Electrical and Electronic Technicians
Electrical Instrument Repairers
File Clerks
Gas-Compressor Operators
Gas and Electric Appliance Repairers
Gas Meter Installers
Gas-Pumping-Station Operators
Guards and Doorkeepers
Heavy Equipment Operators
Helpers, Trades
Hydroelectric-Machinery Mechanics
Industrial Engineers
Instrument Repairers
Janitors, Porters, and Cleaners
Lawyers
Mechanical Engineers
Mechanical Engineering Technicians
Natural and Mathematical Scientists
Nuclear Engineers
Oilers
Painters, Maintenance
Payroll/Timekeeping Clerks
Peripheral EDP Equipment Operators
Pipelayers
Plumbers/Pipefitters
Power Reactor Operators
Power Transformer Repairers
Right-of-Way Agents
Science Technicians
Shipping/Receiving Clerks
Substation Operators
Supervisors, Nonworking Service Only
Surveyor Helpers
Surveyors
Switchboard Operators
Switchboard Operators/Receptionists
Systems Analysts, Electronic Data Processing
Treatment-Plant, Mechanics
Trouble Shooters, Power Line
Turbine Operators
Typists
Water Treatment Plant Operators

METHODOLOGY

A. Sample

The second quarter of 1981 report of employment and wages covered by the New Hampshire Unemployment Compensation law was used as the sampling frame for this survey. The transportation and public utilities establishments were stratified by three digit SIC's (Standard Industrial Classification) and by size class. Any unit with two hundred fifty or more employees was automatically included in the sample.

The actual reported survey period varied by industry and was either the week including April 12, May 12, or June 12, 1982 as designated by the U.S. Bureau of Labor Statistics. The survey was conducted by mail and consisted of an initial mailing and one follow-up. Phone calls and personal visits were made when needed to insure the validity of the estimates.

B. Estimating Procedure

All usable employer questionnaires were separated into seven employment size groups by industry. For example, establishments with employment of 4-9 would be in one size class and those with employment of 10-19 would be in another size class, etc. Any one size class in any one industry represents an estimating cell. All establishments in a given estimating cell were assigned a sample weight which is the inverse of the sampling ratio. For example, if the reported employment in a specific occupation for an establishment is 75, and one out of every three establishments in this estimating cell is included in the sample,the weight assigned to this establishment would be the inverse of 1/3 which is 3, and for estimating purposes, the 75 employment will have a representation of 225 (3 X 75). The employment for any specific occupation in each establishment is blown-up (inflated) by its sample weight and summed for all sample establishments in the cell. A ratio is then obtained by dividing this sum by the weighted total employment. This ratio is multiplied by the benchmark employment for that estimating cell corresponding to the proper survey month (April, May or June 1982). This yields the occupational makeup of the estimating cell for that month. Finally, the employment in like occupations are summed across all employment size classes within each three-digit SIC (Standard Industrial Classification) level to arrive at a total industry employment for each occupation.

C. Variance

Variance is defined as the difference between an expected universe count of an occupation and the actual sample count obtained in a survey. It is computed for each occupation at the estimating cell level. An estimating cell is composed of all establishments in one size class in one industry. The variance for and occupational estimate is the squared and weighted sample observations times a series of correction factors. The sum of the squared and weighted sample observations is derived from summation formulas dealing with weights

assigned to establishments, total employment reported by establishments, and employment reported by establishments for specific occupations. The series of correction factors are derived from summation formulas dealing with benchmark employment less employment for volunteer reports, total employment reported by establishments, weights assigned to establishments, and the square of estimating cell benchmark factors (which are calculated by dividing the cell's benchmark employment by weighted total employment for the cell).

D. Sampling Error

Sampling error is defined as the difference between the estimated data derived from a sample and the data which would be expected if the entire universe of employers were surveyed. It is calculated by taking the square root of the variance of the estimates. In this publication, sampling error is measured on a 68 percent degree of confidence level or one standard deviation. For example, if an estimate of 100 has an associated sampling error of 10 the probability is 68 percent, or two chances out of three, that the true population value would be somehwere between 90 and 110.

E. Relative Error

Relative error expresses the sampling error as a percentage of the estimate. It is derived by dividing the sampling error (or square root of the variance) by the estimate and then multiplying by 100. For example, to illustrate the use of relative error, motor freight transportation and warehousing (SIC 42) lists an estimated total of 978 tractor-trailer truck drivers with a relative error of 17 percent. This indicates, at the 68 percent confidence level, the results of a universe count of tractor-trailer truck drivers would not differ by more than 165 or an estimated high of 1,143 or low of 813. Any occupation with a relative error greater than 50 percent was not published except in the case of SIC 42 where a relatively poor survey response restricted the relative error to the 35 percent level. Relative error was computed only for specific occupations and not for residual categories or occupational groupings.

F. Nonsampling Error

The results of this survey are subject to biases and other nonsampling errors. Although careful editing and screening steps were taken, such errors could arise from faulty questionnaire design, ineffective processing techniques, inaccuracy of data furnished, or the inability to collect data as defined. Non-respondents are a source of nonsampling error for which corrective measures are not available. The possibilty of these errors was recognized from the beginning and every effort was made for their elimination.

Percent of firms reporting each occupation could not be readily calculated for groups of occupations, but only for specific occupations.

APPENDIX

All OES surveys provide for the allocation of occupations reported into seven major categories. Specifically these occupational categories are as follows:

10000 Managers and Officers:

Includes persons concerned with managerial functions common to many types of organization as well as occupations which require a knowledge of the management and operations of the given organizations. Typical examples are: Corporate Officers; Plant Managers; Branch Managers; District Managers; Production Superintendents; General Superintendents; and Managers of such departments as budget, purchasing, sales and distribution, advertising, public relations, personnel and training, etc.

20000 Professional Occupations:

Includes persons concerned with the theoretical or practical aspects of such fields as science, engineering, technical work, art, education, medicine, law and business relations. Most of these occupations require substantial educational preparation, usually at the university level. Typical examples are: Architects; Engineers (including Sales Engineers); Metallurgists; Physicists; Mathematicians; Statisticians; Biologists; Economists; Accountants and Auditors; Purchasing Agents; Public Relations Practitioner; Personnel and Training Specialists (other than departmental managers); Lawyers; Physicians and Surgeons; Registered Nurses; Editors and Writers.

30000 Technical Occupations:

Includes all persons actually engaged in technical work utilizing theoretical knowledge of fundamental scientific, engineering, mathematical, computer programming or draft design principles comparable to those acquired through study at technical institutes, junior colleges or other formal post high school training less extensive than a four year college course, or through equivalent on-the-job training or experience.

40000 Service Occupations

Includes those workers in occupations concerned with the performance of services for persons that require either direct contact or close association with the individual; occupations concerned with the protection of individuals or of public or private property; occupations concerned with preparing and serving food and beverages; and occupations related to the cleaning of the interior and equipment of buildings, offices, stores, and similar places.

50000 Includes all skilled, semiskilled, and unskilled workers performing machine and manual tasks involving maintenance, construction, repair, material handling and production.

60000 Clerical Occupations:

Includes clerical personnel whose work involves preparing, transcribing, transferring, systematizing and preserving communications and records; collating accounts; distributing information. Also includes clerical workers involved in planning, coordinating or expediting production and the flow of work and workers involved in the clerical aspects of receiving, storing, issuing or shipping of materials, merchandise, supplies, or equipment.

70000 Sales Occupations:

Includes persons concerned wholly or primarily with selling when knowledge of the goods or services sold is required. Excludes Sales Engineers (see Professional and Technical Workers) and Cashiers (see Clerical Workers).

Explanation of Footnotes:

1/ Employment estimate represents covered employment adjusted for additional current information. Because of data not published, occupations may not add up to total. Data entries were not rounded in order to preserve their analytic value. However, they should not be construed as being absolute but rather as relative values.

2/ Relative errors apply equally to estimated employment and the percent distribution. Please refer to technical notes for an explanation of relative error.

N.A. Not Applicable